

Safety Siren™

*Carbon Monoxide,
Propane & Methane*

DETECTOR

Owner's Manual

Model Number

HS80004

HS80104

HS80204

HS80504

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Family Safety Products Inc.

Made in USA

Table of Contents

Facts and Concerns about Carbon Monoxide and Combustible Gas	3
Sources of Carbon Monoxide	5
Sources of Combustible Gas	6
Symptoms of Carbon Monoxide Poisoning	7
Operating Instructions	8
Installation	8
Location of the Detector	9
Testing Safety Siren™ for Carbon Monoxide and Combustible Gas	9
What to Do When the Alarm Sounds	
For Carbon Monoxide	10
For Combustible Gas	10
SafetySiren™ for Carbon Monoxide and Combustible Gas	
Sensor Specifications	11
Warranty	12

FACTS AND CONCERNS ABOUT CARBON MONOXIDE:

Carbon Monoxide (CO) is a colorless, odorless, tasteless gas, which is very toxic and nearly impossible to detect without the use of sensing equipment. Carbon monoxide can be absorbed into the body's bloodstream nearly 10 times faster than pure oxygen. Thus it can limit the body's ability to absorb oxygen whenever carbon monoxide is present, even in small amounts. This reduced ability of the body to absorb oxygen is known as chemical asphyxiation and it can result in death whenever carbon monoxide is present in small quantities over a period of time.

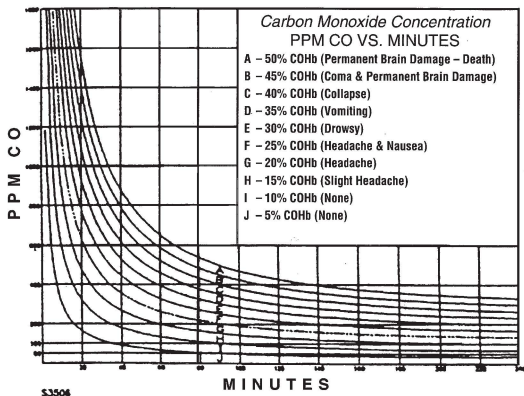
As the level of carbon monoxide rises in a closed environment, the toxic effects require less and less time to occur. This relationship can be seen in Figure 1. While it takes over three hours for an atmosphere with 0.01% CO to produce a headache, it takes only one hour for 0.02% CO to produce the same effects. At 0.04% CO the time required to produce the same headache is only 25 minutes. The HS 80004 SafetySiren™ unit is designed to generate an alarm at the following exposure levels as defined by Underwriters Laboratories:

- in less than 90 minutes at 0.01% CO (100ppm CO)
- in less than 35 minutes at 0.02% CO (200ppm CO)
- in less than 15 minutes at 0.04% CO (400ppm CO)

Warning:

This device may not alarm at low carbon monoxide levels. The federal Occupational Safety and Health Administration (OSHA) has established that continuous exposure to CO levels of 50 ppm should not be exceeded in an eight hour period. This detector has not been investigated for carbon monoxide detection below 100 ppm. Individuals with a medical condition may consider using a more sensitive device.

**Figure 1 – Carbon Monoxide Concentration
versus Time and % COHb**



Sources of Carbon Monoxide:

Carbon monoxide results from incomplete combustion of carbon-based fuels such as natural gas, charcoal, wood, coal, heating oil, kerosene, gasoline and propane. Many of these fuels can be found throughout the home, for example in kitchen appliances, furnaces, water heaters, fireplaces, portable heaters, barbecue grills, and automobiles. If incomplete combustion occurs in any of the devices shown below and they are improperly vented to the outside, the danger of CO poisoning exists.

Figure 2. Sources of carbon monoxide



Water Heater



Automobile



Space Heater



Fireplace



Furnace



Charcoal Grill

Sources of Combustible Gas

Disastrous explosions can occur from leaks of combustible gases, such as natural gas (methane) and LPG gas (propane). These gases are used to fuel a variety of common appliances found in the home. Cooking stoves/ovens, hot-water heaters, clothes dryers, space heaters, fireplace starters, and heating furnaces are the most common gas-fuel burning appliances. Natural gas and propane can cause devastating explosions from even the smallest leaks from any of these appliances.

Sources of Combustible Gases



Fireplace



Furnace



Dryer



Space Heater



Water Heater



Stove

Symptoms of Carbon Monoxide Poisoning

The following symptoms are related to carbon monoxide poisoning and should be discussed with all members of the household:

Mild Exposure:

Slight headache, nausea, vomiting, fatigue (often described as “flu-like” symptoms).

Medium Exposure:

Severe throbbing headache, drowsiness, confusion, rapid heart rate.

Extreme Exposure:

Unconsciousness, convulsions, cardiopulmonary failure, death.

Many cases of reported carbon monoxide poisoning have indicated that although victims were aware they were not well, they became disoriented to the point they were unable to save themselves by either exiting the building or calling for assistance. Young children and household pets may be the first affected by CO poisoning.

OPERATING INSTRUCTIONS

Installation

This HS 80004 SafetySiren™ Carbon Monoxide and Combustible Gas Sensor plugs directly into a standard 110-volt AC household outlet. The unit should be oriented vertically so that all of the script on the face of the unit appears in the upright position. The ventilation slots must not be blocked and the unit must be kept dust free. A proper airflow must be maintained through the unit to obtain an air sampling representative of the local environment. The only maintenance the unit requires is a thorough vacuuming once every six months.

WARNING: There are no user serviceable parts inside the unit. Do not remove the back cover. Removal of the back cover will void the warranty.

CAUTION: When the unit has been stored unplugged for several weeks, its sensitivity to combustible gases will decline. To restore the unit to normal sensitivity, allow a 24-hour warmup period.

Once the unit is plugged into the wall outlet, the green power indicator should light up. The red indicator will flash approximately once every three seconds to indicate the unit is operating properly. It should be noted that the sounding of the alarm will indicate whether the sensor has detected unsafe levels of CO or combustible gas. Continuous appearance of the red indicator and the continuous sounding of the audible buzzer indicates a presence of potentially dangerous levels of CO. Continuous appearance of the red indicator and the intermittent sounding of the audible alarm indicates the presence of potentially dangerous levels of combustible gases. If the unit begins beeping once every 5 seconds or the red LED light is not flashing once every 3 seconds, then a fault has

occurred in the unit. If either condition exists, disconnect the unit from the AC power immediately and call Family Safety Products at 616-530-6540.

WARNING: Make sure that the unit is not plugged into a wall outlet controlled by a light switch.

CAUTION: This carbon monoxide and combustible gas detector is designed to detect carbon monoxide gas and ANY source of combustion or the combustible gases of methane and propane. It is NOT designed to detect smoke, fire, or other gases.

Location of the Detector

The Consumer Product Safety Commission recommends that each household have at least one Carbon Monoxide detector placed in the sleeping areas of the home. A second detector located near appliances or equipment using combustible fuel adds an extra measure of safety. Figure 3 shows suggested locations in the home. Make sure that airflow through the unit's ventilation slots is not inhibited by curtains, furniture or other items. The audible alarms should be able to be heard from all sleeping areas in the home. Units must not be placed within five feet of open flame cooking appliances. Also, avoid placing units near paint thinner fumes or in areas where the temperature varies outside the range of 40.0°F (4.4°C) to 100°F (37.8°C).

CAUTION: This detector will only indicate the presence of carbon monoxide and combustible gas at the sensor. Carbon monoxide and combustible gas may be present in other areas.

Figure 3 – Suggested locations for SafetySiren™ for Carbon Monoxide and Combustible Gas sensors.



Testing the SafetySiren™ for Carbon Monoxide and Combustible Gas Sensor

To verify the circuitry is operating properly, use the Test/Reset button built into the unit. Simply press down on the button during normal operation and note the red indicator. The red indicator will light continuously and the audible alarm will sound as long as the button is held down. Once you release the Test/Reset, the red indicator will return to blinking at a three-second rate and the audible alarm will cease, indicating the unit has returned to a normal operating mode. Test the unit monthly. If the unit begins beeping once every 5 seconds or the red LED light is not flashing once every 3 seconds, then a fault has occurred in the unit. Disconnect the unit from the AC power immediately and call Family Safety Products at 616-530-6540.

Resetting the Alarm

The Test / Reset button may also be used to reset the audible alarm during the alarm mode. Once the alarm is activated by detection of high CO or combustible gas levels, simply press the Test/Reset button to disable the audible alarm. If the high CO level or combustible gas level continues, the audible alarm will again sound within a 2.5 minute period. The red indicator will remain lit during the time the audible alarm is disabled, indicating that the alarm condition still exists.

WHAT TO DO WHEN THE ALARM SOUNDS

WARNING

If a continuous alarm sounds for Carbon Monoxide

Activation of this device indicates the presence of carbon monoxide which can be FATAL.

- 1) **If anyone has a headache or an upset stomach, call the Fire Department and move to a location which has fresh air. DO A HEAD COUNT TO CHECK THAT ALL PERSONS ARE ACCOUNTED FOR. DO NOT RE-ENTER THE PREMISES UNTIL IT HAS BEEN AIRED OUT AND THE PROBLEM CORRECTED!**

If no one exhibits symptoms of discomfort associated with carbon monoxide poisoning, simply:

- 2) Operate the reset button,
- 3) Turn off appliances, vehicle, or other sources of combustion at once (furnace, water heater, wood burning stove, RV, automobile, or the like),
- 4) Get fresh air into premises or vehicle,
- 5) Call a qualified technician and have the problem fixed before restarting appliances or vehicle.

If the intermittent alarm sounds for Combustible Gas

An intermittent audible alarm from this device indicates the presence of combustible gases, the source of which may be an appliance such as a furnace, water heater, oven/stove, or dryer.

- Do not operate any electrical devices such as light switches or telephones.
- Do not plug or unplug any electrical devices because they may cause a spark.
- Immediately extinguish any flames or pilot lights.
- Ventilate the area by opening doors and windows.
- Determine the source of the gas. Seek a qualified technician or call your local gas company.
- Turn off the gas supply.

SafetySiren™ for Carbon Monoxide and Combustible Gas Sensor Model HS 80004 Specifications

Power Source	110-volt AC/60Hz at 15 Watts
CO Sensor	CO Sensor calibrated at 200 ppm CO specific to avoid false alarms.
CG Sensor	Alarm trip-point set at less than 25% LEL (Lower Explosive Limit) 3.8% by volume Natural gas (methane) in air 2.1% by volume LP-gas (propane) in air
Temperature	4.4°C (40°F) to 37.8°C (100°F)
CO Audible Alarm	Continuous 85dB alarm at 10 ft. for CO
CG Audible Alarm	Intermittent alarm for Combustible Gas
Visual Alarm	(3 second blinking rate for normal operation). Continuous RED LED during alarm condition.
Green LED Operation	Continuous Operation When Power On
Detection frequency	Air sampled every 2.5 minutes for CO. Air sampled continuously for Combustible Gas after an initial warm-up of 2.5 minutes
Test	Test button verifies proper operation when unit is in normal operation. Once in alarm mode the Test button will reset audible alarm until next air sampling
Dimensions	4.7 inches x 3.1 inches x 2.1 inches
Weight	12 ounces

Limited Warranty

Your Safety Siren™ for Carbon Monoxide and Combustible Gas has a five-year warranty from date of purchase against defects in material and workmanship. Units returned to the manufacturer during this period because of such defects will be repaired or replaced free of charge. For repairs within the warranty period or receipt of a faulty unit, call Family Safety Products at 616-530-6540 to receive a Return Authorization Number (RAN). Include a written description of the problem. You may then ship the unit to the address listed below along with the RAN, and proof of purchase.

The warranty covers only defects in material or workmanship in normal use and not damage from negligent handling, misuse, or lack of proper care. Important: Do not remove the back cover. Such removal will void the warranty. This warranty stands in place of any other warranty either expressed or implied.

Family Safety Products, Inc. is not liable for any personal injury, property damage or any incidental or consequential damage resulting from gas leakage, fire, or explosion. The sole remedy for breach of this limited warranty does not, in any instance, exceed the purchase price. Your SafetySiren™ for Carbon Monoxide and Combustible Gas sensor does not constitute property, disability, life or any other type of insurance.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.